

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1. (Currently Amended): Apparatus for producing fatty acid methyl ester, comprising:

at least one container for fats;

a tank for alkaline solution;

a tank for alcohol;

a mixing vessel for compounding the alkaline solution and the alcohol;

a reaction section structured and arranged to perform transesterification under pressure with the pressure being reduced during transesterification, said reactor section which comprises comprising a static mixer comprising a pipe filled with balls to enlarge boundary surfaces of a mixture being transesterified in said reaction section, and said reaction section is connected to the at least one container and the mixing vessel through a high pressure pump with a pressure up to capable of achieving a pressure of 200 bar for introducing the fats and the alkaline solution to the reaction section; said reaction section being structured and arranged to enlarge border surfaces of a mixture in said reaction section and perform transesterification under pressure, and the pressure being reduced during transesterification; and

a separation unit downstream from the reaction section.

Claims 2-12. (Canceled)

Claim 13. (Original): The apparatus of claim 1, wherein the separation unit comprises a filtration unit.

Claim 14. (Original): The apparatus of claim 13, wherein the filtration unit comprises a surface filter comprising a membrane.

Claim 15. (Original): The apparatus of claim 14, wherein the surface filter comprises a porous carrier and a layer applied to the porous carrier, which layer acts as a membrane.

Claim 16. (Original): The apparatus of claim 15, wherein the porous carrier comprises a pipe.

Claim 17. (Original): The apparatus of claim 15, wherein the porous carrier comprises one of aluminum oxide, porous glass, and silicate.

Claim 18. (Original): The apparatus of claim 15, wherein the layer acting as a membrane has at least one of lipophilic, hydrophilic, and amphoteric properties.

Claim 19. (Original): The apparatus of claim 15, wherein the layer acting as a membrane comprises a ceramic membrane.

Claim 20. (Original): The apparatus of claim 19, wherein the ceramic membrane comprises one of titanium dioxide and zirconium dioxide.

Claim 21. (Original): The apparatus of claim 15, wherein the layer acting as a membrane has a pore size which is at least one of a nano pore size and a micro pore size.

Claim 22. (Original): The apparatus of claim 21, wherein the pore size is 5-200 nm.

Claim 23. (Original): The apparatus of claim 13, wherein the filtration unit comprises one of a molecular sieve filter and a molecular sieve membrane.

Claim 24. (Original): The apparatus of claim 13, wherein the filtration unit comprises a multiphase filter.

Claim 25. (Original): The apparatus of claim 1, wherein the separation unit comprises a distillation unit comprising at least one evaporator and at least one condenser.

Claim 26. (Original): The apparatus of claim 1, further comprising a distillation unit comprising at least one evaporator and at least one condenser downstream from the separation unit.

Claim 27. (Original): The apparatus of claim 1, further comprising a down-flow evaporator.

Claim 28. (Original): The apparatus of claim 1, further comprising a thin-layer evaporator.

Claim 29. (Original): The apparatus of claim 1, further comprising a rotation flow evaporator.

Claim 30. (Original): The apparatus of claim 1, further comprising a distillation unit which is upstream of the separation unit.

Claim 31. (Original): The apparatus of claim 1, further comprising an additional separation unit downstream from the separation unit.

Claim 32. (Previously Presented): The apparatus of claim 31, wherein the additional separation unit is connected to the reaction section by a connecting pipe from the at least one container for the fats.

Claims 33-34. (canceled)

Claim 35. (Previously Presented): The apparatus of claim 1, further comprising a flash reactor downstream of the reaction section for evaporating surplus alcohol.